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THE RECREATION  
VEHICLE IN CALIFORNIA

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## I. RECREATION VEHICLE DEMAND - PROFILE

### A. INTRODUCTION

The ever increasing amount of leisure time and discretionary income is causing some profound changes in the American lifestyle. This is evident in the fast growing recreation business. The amount of money spent in the United States on recreation has increased from \$18 billion in 1960 to \$142 billion plus in 1971. The average worker has around 121 days off from work each year. Recreation industry studies have shown that the American people are using this time for more family oriented outdoor activities (Isley 1973).

In California the increase in recreational activities has been channeled, at a generally increasing rate, into the off-road vehicle. A significant portion of the residents of California, in an effort to occupy leisure time with fulfilling activities, have rediscovered the attractions of areas away from permanent human habitation. They are using the products of modern technology to reach into the landscape for a more remote recreation experience with a greater degree of comfort and convenience. To these people, the internal combustion engine provides a power source for adventure.

### B. THE DEMAND FOR RV RECREATION

The sale of off-road vehicles has increased an overall from 7 percent to 9 percent per year since 1969 (Honda et al 1973). There are an estimated 1.8 million motorcycles (M.O.R.E. 1973), 650-750 thousand four-wheel drive vehicles<sup>1/</sup> and an undeterminable number of reconstructed vehicles (dune buggies) in the State of California. Nearly 15 percent of California's population own or have access to an off-road vehicle.

The motorcycle represents an estimated 73 percent of all off-road vehicles. California contains 17 percent (Table I & II) of the nation's registered motorcycles and only 9 percent (U.S. Census 1970) of the nation's population. Of the estimated 1.8 million motorcycles in California, approximately 67 percent (Honda et al 1973) are in southern California.

A 1970 Gallup Poll (Woolsey 1970) estimated one motorcycle for every 10 households in the United States. In California there was a motorcycle for every 3.5 households (U.S. Census 1970). The actual number

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<sup>1/</sup> Statistics relevant to the four-wheel off-road vehicles are incomplete due to registration inconsistencies. Approximately 87 percent of all registered off-road vehicles in California are motorcycles and 11 percent are four-wheel vehicles. This does not represent the total RV picture simply because until 1971 with the enactment of the Chappie Z'berg Act, non-street legal RV's were not required to be registered. Also, most four-wheel drive vehicles that are legal for street use are registered as stationwagons to reduce registration fees.

of cycles represents only partially the total number of cycle riders or enthusiasts. There are an estimated 1.2 (Sanford 1973) riders for each motorcycle or 2.1 million enthusiasts. Approximately 1.5 million enthusiasts in southern California and over 60 percent (Honda et al 1973) ride off-road.

### C. OFF-ROAD VEHICLE ORGANIZATIONS

Membership in recreation vehicle clubs and associations is increasing from 15 to 20 percent per year (Edwards 1973) or roughly at double the rate of the ORV recreational activity. This rapid growth is partially a result of the increased need to make ORV recreationists' desires known to legislative and land management agencies. There are also obvious social benefits.

Four large associations represent several hundred clubs with a combined membership near the 50 thousand mark. These associations represent every conceivable vehicle type and nearly all interest groups, the majority of which use an RV to participate in their recreational activities. These associations are tenacious in their defense of their interests and equally as worthy when a conservation project or other work for the public good is needed.

A nationwide survey indicates that 17.4 percent (Power & Assoc. 1971) of four-wheel drive owners belong to a recreation club. In California, an estimated 5 percent to 10 percent (Edwards 1973) of all RV owners belong to recreation vehicle clubs or associations. The lesser tendency toward organization exhibited by the California RV owner makes him more difficult to reach and lessens his collective political powers.

### D. THE RV RECREATIONIST - A SOCIO-ECONOMIC PROFILE

Off-road vehicle recreationists are as diverse in their interests as the variety of vehicles they own. When viewed from a social and economic aspect, the owners or enthusiasts of each vehicle type exemplifies certain distinguishable characteristics.

#### 1. The Motorcyclist

The first impression of an activity such as off-road motorcycling might be that its participants are probably young, single or generally people with few responsibilities. The results of a 1972 nationwide Cycle News magazine survey discredit this belief. Twenty year olds no longer constitute the majority of motorcycle riders. In fact, over 41 percent of those sampled<sup>2/</sup> were over 30 years old. Off-road motorcycling is a family activity. Ninety-five percent of all riders surveyed were male and 62 percent were married. Nearly 58 percent have attended

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<sup>2/</sup> This study was a sampling of readers of Cycle News and not meant to represent all cycle owners.

college and nearly 5 percent hold advanced degrees. In terms of household income, 73 percent of those households surveyed who owned a motorcycle and used it off-road earn more than \$10,000 per annum and 19 percent earn more than \$20,000. (Refer to Tables III through VI for a complete breakdown of social-economic data for each vehicle type.)

In California 79 percent of off-road riders are male while 64 percent are married. At least 58 percent do the majority of their riding with a family member while a much larger percent (61) than indicated by the national sample are under 25. They also make slightly less money than motorcycle riders in the national sample--63 percent earn more than \$10,000 and 14 percent over \$20,000 per annum. Because of his relative youth, he is slightly less educated with from 30 to 35 percent having attended college. As with the national sample, the majority of motorcycle riders fall in the semi and skilled labor and managerial-proprietor occupation groups (Honda et al 1973).

## 2. The Competition Oriented Motorcycle Recreationist

In general, motorcycle enthusiasts are more competitive oriented than other ORV recreationists. In a sample conducted by Yamaha of all motorcycle owners in California, 33 percent used their cycle in competitive events of one kind or another while 20 percent planned to sometime in the future. Only 47 percent indicated no interest in competition (Compendium 1971).

The average desert competitive motorcycle rider in California is slightly older than the non-competitive motorcyclist (average age 31.6 years). He is most likely a male (93 percent) and married (77 percent). He differs very little from the average off-road rider in income and level of education. In occupation group, a far larger percentage work in the skilled-semi skilled categories. Also, a far larger percent of competitive riders have attended trade school (Buck & Stockton 1973).

## 3. The Four-Wheel Drive RV Recreationist

In California approximately 65 percent of four-wheel drive buyers are male with an average age of 34. Nearly 80 percent are married and have an average income of from \$15 to \$16 thousand per annum (median income in 1972 was \$15,613). The average four-wheel drive owner has an average education of just over 14 years. Nearly 43 percent have attended college. Occupation groups are evenly divided between semi-skilled and skilled labor, management-proprietor and professional (Chevrolet et al 1973).

## E. SUMMARY

When compared directly to the average California resident, the RV owner is slightly older, better educated and has a higher income. In general, he falls in a higher socio-economic class.

If the RV recreationist is a cyclist he probably earns less money, is younger and more likely to be female than his four-wheel drive owning counterpart. In comparison, the competitive cycle rider is older and more likely to be married than his non-competitive counterpart. He is also more likely to be a blue collar worker.

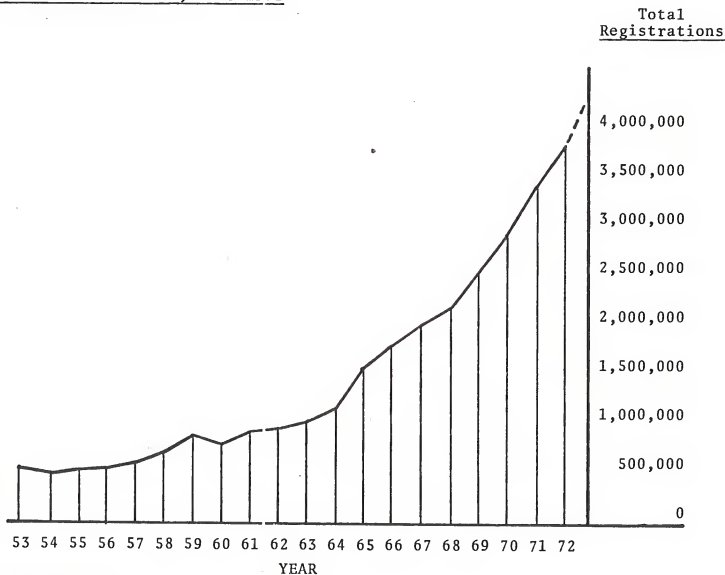
In comparing the four-wheel drive owner to the cyclist in California, the four-wheel drive owner is more likely to be married, older and better educated. He also has a higher income and is more likely to fall within the management-proprietor and professional occupation groups.

If there is a "typical" RV recreationist, he probably occupies the upper part of a broad middle ground in the California socio-economic structure. Most likely, he can be found in the State's metropolitan areas - in suburban rather than core city origins.

TABLE I

TOTAL U.S. MOTORCYCLE REGISTRATIONS, 1953-1972

53 -	411,835
54 -	404,772
55 -	412,377
56 -	431,494
57 -	468,816
58 -	521,332
59 -	565,352
60 -	547,080
61 -	595,669
62 -	600,400
63 -	786,318
64 -	949,701
65 -	1,381,956
66 -	1,752,801
67 -	1,953,022
68 -	2,100,912
69 -	2,400,000
70 -	2,814,750
71 -	3,345,179
72 -	3,787,000*



\*Estimated

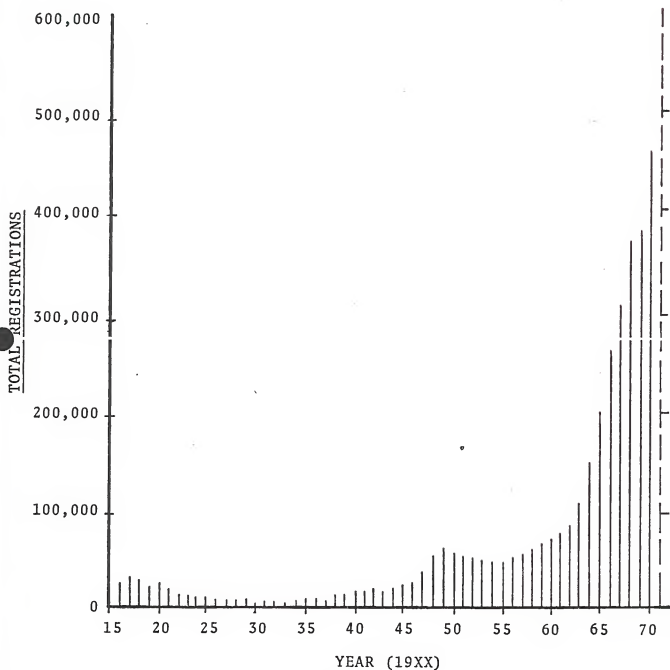
Source: R.L. Polk &amp; Company



TABLE II

TOTAL MOTORCYCLE REGISTRATIONS

-- California Only --



Sources: California Department of Motor Vehicles  
R. L. Polk & Company

TABLE III  
RV RECREATIONIST  
Comparative Statistics

	M.C. Owners <sup>1/</sup> In U.S. 1971	Off Road <sup>2/</sup> M.C. Owners California 1970	Competitive <sup>3/</sup> Riders Desert 1973	4 WD <sup>4/</sup> Owners 1971	California <sup>5/</sup> Population 1970
Under 25 Years Age	29	61	26	23	43
Married	62	64	77	79	—
Attended College*	58	32	35	43	13**
Annual Income Greater Than \$10,000	73	63	62	76	55

\* Have attended some college

\*\* Completed four years or more

Sources: 1/ "On Road Primary Usage vs. Off Road Primary Usage" Yamaha 1971.

2/ Yamaha Compendium 1971.

3/ Buck & Stockton 1973.

4/ Chevrolet et al., 1973

5/ U.S. Census of the Population 1970.

TABLE IV  
RV RECREATIONISTS  
Approximate Family Income

		<sup>%</sup> M.C. Owners In U.S. 1971	<sup>%</sup> Off-Road M.C. Owners California 1970	<sup>%</sup> Competitive Desert Riders 1971	<sup>%</sup> 4 WD Owners Calif. 1971	<sup>%</sup> California Population 1970
Under	\$ 5,000 )		4.7	10.0	0.0	16.7
	)					
\$ 5,000 - \$ 7,999	)	31.5	9.8	13.0	7.6	16.1
	)					
8,000 - 9,999	)		17.1	15.0	15.3	12.5
	)					
10,000 - 14,999	)		34.7	34.0	35.6	28.0
	)					
15,000 - 19,999	)	60.5	13.0	17.0	21.6	20.6
	)					
20,000 - 24,999	)		7.5	11.0	8.0	20.6
	)					
25,000 +	)		6.9	11.0	12.0	6.1
	)					
Not Known		8.0	6.0	11.0		
					Median \$15,613	Median \$10,732

Sources: Same As Table III

TABLE V  
RV RECREATIONISTS  
Education Statistics

<u>Last School Attended</u>	<sup>%</sup> M.C. Owners In U.S. 1971	<sup>%</sup> Off-Road M.C. Owners California 1970	<sup>%</sup> Competitive Desert Riders 1971	<sup>%</sup> 4 WD Owners Calif. 1971	<sup>%*</sup> California Population 1970
Grade School	9.8	2.2	6.0	7.3	4.3
High School	46.8	34.2	18.0	28.0	82.4
Trade School	8.7	9.0	30.0	—	—
College	26.2	46.9	28.0	43.0	13.4
Post Graduate	3.4	7.7	7.0	16.3	—

\*School Completed

Sources: Same As Table III

TABLE VI

## RV RECREATIONIST

Comparative Age Categories

<u>Age Categories</u>	<u>% M.C. Owners In U.S. 1971</u>	<u>% Off-Road M.C. Owners California 1970</u>	<u>% Competitive Desert Riders 1971</u>	<u>% 4 WD Owners Calif. 1971</u>	<u>% California Population 1970</u>
18	36.0	27.3	8.0		33.0
18 - 25	24.0	34.0	18.0	31.0	21.0
26 - 34 )		26.0	43.0	44.0	15.0
35 - 44 )		7.9	18.0	14.0	13.0
45 - 55 )	38.0	2.5	12.0	7.0	10.0
55 + )		1.6	1.0	5.0	9.0

Sources: Same As Table III

TABLE VII  
RV RECREATIONISTS  
Occupation Groups

<u>Occupation Group</u>	<u>% M.C. Owners In U.S. 1971</u>	<u>% Off-Road M.C. Owners California 1970</u>	<u>% Competitive Desert Riders 1973</u>	<u>% 4 WD Owners Calif. 1971</u>	<u>% California Population 1970</u>
Labor	7.2	5.1	5.0	9.6	7.8
Semi-Skilled/Skilled	21.0	19.6	48.0	14.0	33.2
Service Worker	4.0	3.7	10.0	10.0	8.5
Technical	10.0	9.4	4.0	8.6	8.4
Sales	8.1	6.0	3.0	10.0	7.7
Clerical	2.5	3.5	1.0	3.0	7.6
Management Proprietor	15.0	11.6	11.0	17.6	11.5
Professional	10.0	15.6	3.0	14.0	8.4
Retired	.5	1.0	2.0	3.3	—
Not Employed	—	5.2	—	3.3	6.1
Student	19.0	11.5	7.0	7.5	—
Other	2.0	7.5	6.0	—	.9

Sources: Same As Table III

## II. ECONOMICS OF RV RECREATION

### A. INTRODUCTION

There is a distinct lack of adequate research and information regarding the economic impact of recreation vehicles on the California economy. Recreation vehicle sales have been growing at an increasing rate. With the advent of the energy crisis, sales of RV may drop off drastically. Due to the lack of an outdoor recreation market place per se, economic values are difficult to evaluate and the total effect of the energy crisis hard to assess. The following analysis is based on data collected prior to the energy crisis.

### B. ECONOMIC IMPACTS WITHIN SOUTHERN CALIFORNIA

The increasing consumer spending on recreational equipment (Table VIII) is having economic effects at both the state and local levels. Though statistics are not available to adequately evaluate RV economic impacts at the state level, a summary of economic values based on gross sales, employment, number of shops, etc. is presented for the motorcycle industry in Table IX. Table X includes dollar values attributable to sales taxes, gas taxes, etc. for 1971 and 1972. There is only limited economic data available for the four-wheel drive industry in California, and no data available on the reconstructed vehicle.

Economic data from the four-wheel drive division of Chevrolet and International indicate that their combined sales represent 40 percent of the total California market. The total dollar contribution of these companies to the California economy, including retail sales of vehicles, parts and accessories, advertising, trade shows, etc. equals \$59 million. Assuming this figure represents 40 percent of the total four-wheel drive market in California, the total dollar value of the four-wheel drive industry would be nearly 150 million dollars.

Industry furnished estimates indicate that 60 percent of four-wheel drive sales and from 67 to 70 percent of motorcycle sales occur in southern California. Using these estimates, the motorcycle industry contributes from \$390 to \$407 million and the four-wheel drive industry contributes approximately \$88 million from direct retail sales, advertising, trade shows, etc. to the southern California economy.

### C. ECONOMIC IMPACTS OF RV OUTDOOR RECREATION ON LOCAL AREAS

An analysis of the economic impact of off-road recreation on local economies indicate that the inputs are substantial and important. Economic impacts that arise from off-road recreation are of two kinds. One class of values include the primary benefits, expressed as the willingness to pay on the part of consumers of recreation services.

TABLE VIII

CONSUMER SPENDING ON RECREATIONAL EQUIPMENT FOR 1970 AND  
PROJECTIONS FOR 1971 (CALIFORNIA, OREGON & NEVADA)

	Millions		
	1970	1971	% Increase
Recreation Vehicles*	\$1,150	\$1,250	8.7
Boats	940	997	6.1
Motorcycles	750	900	20.0
Hunting	584	601	2.9
Golf	348	384	10.0
Snowmobiles	309	376	21.7
Fishing	268	314	17.0
Team Sports	184	201	8.2
Tents & Sleeping Bags	145	151	4.1
Winter Sports	88	104	18.2
Tennis	28	30	7.1

Considering the proportionately greater cost of boats and recreation vehicles, the impact of the motorcycle market is even more impressive.

\*Includes motor homes, pickup campers, travel trailers and camping trailers.

Source: Marketing Magazine, July 1, 1971.



TABLE IX  
SUMMARY OF MOTORCYCLE  
Industry Gross Revenue -- California 1972

Total Dealerships	936 (13% of nation's total)
Dealership Employment	9,800 (approximately)
Dealership Gross Business	\$492 million
Total Accessory Stores	119
Accessory Store Employment	12,168
Accessory Store Gross Business	\$53 million
Service and Repair	\$32 million
Advertising and Promotion	\$4 million
Trade Shows	\$1 million

Six Major Distributors in California Employ 10,000 people.

TOTAL DOLLAR VALUE \$582 MILLION.

Sources: Ted Evans CMIC  
Mel Stahl MIC

TABLE X

MOTORCYCLE STATISTICS BASED UPON 1971 REGISTRATIONS

(Prepared by M.O.R.E.)

1971 Registrations (Fee Paid)	657,081
1971 Non-Registered	<u>1,117,038</u>
1971 Total	1,774,119
1971 Motorcycle Enthusiasts	2,128,943
1971 Miles Traveled	3,099,385,893
1971 Gallons of Gasoline Purchased	77,484,640
1971 Gasoline Sales Tax Paid	\$5,423,925
1972 Motorcycle Value	\$582,000,000
Sales Tax Paid on Motorcycles (1972)	\$29,100,000

That is, those who use the recreation opportunity receive a direct benefit whose value is largely measured by their willingness to spend available income. Willingness to pay is the total dollar expenditure by the ORV recreationist to participate in his activity.

The second class of benefits include the gains in the area where the expenditures are made. Otherwise, what is expense to the recreationist is income to the supplier of goods and services. Although the recreation opportunity is generally not marketed as such, there are substantial commercial impact effects from the expenditures necessarily involved in use of the available areas.

Food, lodging and automobile service comprise the bulk of the expenditure items that take place en route and near recreation areas. These expenditures produce the major economic impact on local communities. One of the more important consequences of expenditures within local communities is that by no means all of the total expenditures made by recreationists take place in the community located in proximity to the recreation area. Also, total expenditures are not all net income to the locality. Much of the gross income must go outside the area to buy the goods and products necessary to provide the services required by the RV recreationist. The income, the number of jobs or employment, sales, and value added are all units which should be included in an economic analysis (Clawson 1966).

There are two components to the income producing effects of recreation expenditures as they relate to the dependency of a community on recreational activity. First are the direct or "first round" effects of expenditures by all recreationists. Second is the successive indirect effects of local expenditures of non-local recreationists. It is only this "new money" created through local expenditures by non-local recreationists which generates income in excess of the initial effects. (Frandsen 1972.)

To estimate the economic impact of ORV recreation on local areas, three steps are required: (1) estimate expenditures by recreationists; (2) reduce these expenditures to income effects, and (3) compute primary and secondary income effects on the community.

#### 1. Procedure

Total expenditures can be reduced to earnings (income) by means of a factor based on national averages. This factor is 0.705 (Frandsen 1972). Using the procedure; expenditure  $\times$  .705 = first round income effects attributable to recreation. Viewed by itself, this first round income is the recreation industry of the community. Obviously, BLM's share or that income generated due to recreation on BLM administered lands, is dependent on the percentage of ORV activities taking place on these lands. To compute the total income effects on the community's or county's economy, the following formula was utilized: Total local or community income effects of recreation expenditures are equal to:

$E_1 + (E_1 A) \times Z$  where:

E = first round income effects attributed to recreation

$E_1$  = first round income effects attributable to local recreation expenditures

A = the percentage of local expenditures by non-local recreationists to total recreation expenditures.

Z = the expansion factor (national trade multiplier for recreation 1.505).

(Frandsen 1972.)

## 2. Example

The following example will help quantify economic impacts of ORV recreation within a local area. Based on expenditures data collected from 282 personal interviews on Washington's Birthday weekend, February 19-21, 1972 and the weekend of April 14-15, 1973, the following average expenditure data was collected:

Average total expenditure per family group per RV recreation  
Outing: \$65.00

Average expenditure made locally (nearby community or county of recreation visitation): \$18.48

Selecting Imperial County, California and totaling visitor use estimates based on aerial observations for the years 1972 and 1973 (Wintch, Bosworth 1973).

Total estimated 12-hour visitor use days for Imperial County, California:

<u>Year</u>	<u>12-Hour V.U.D.</u>
1972	2,250,000
1973	2,834,800

Assuming:

70 percent of V.U.D. are RV oriented.

100 percent of use occurs on national resource lands.

Average family group = 24 V.U.D. per trip.

1972: Total V.U.D. ÷ average family group V.U.D. = number families per year x 70 percent RV orientation = total RV oriented family visitors for 1972.

$$\begin{aligned}
2,250,000/24 \text{ V.U.D.} &= 93,750 \times .70 = 65,625 \\
E &= \$65.00 \times 65,625 \times .705 = \$3,007,265.60 \\
E_1 &= \$18.48 \times 65,625 \times .705 = \$854,988.75 \\
A &= E_1/E \times 100 = 854,989/3,007,265 \times 100 = 28\% \\
E_1 + (E_1 A) \times Z &= \$854,989 + (854,989 \times .28) \times 1.505 \\
&= \$1,647,050.70 \text{ Economic value of RV} \\
&\quad \text{recreation to Imperial County in 1972.}
\end{aligned}$$

Visitor use increased 21 percent for 1973. Total economic value contributed for 1973 would be \$1,992,931.

As previously mentioned, expenditures are generally associated with food, transportation and lodging, etc. Total expenditure will partly be a function of travel distance but it is possible that local expenditures remain relatively constant. If total and local expenditures were to remain constant per family outing, an average economic value contributed to a local economy per family outing could be estimated.

Using the previously discussed procedure:

$$\begin{aligned}
E &= \$65.00 \times 1 \times .705 = 45.82 \\
E_1 &= \$18.48 \times 1 \times .705 = 13.02 \\
A &= E_1/E \times 100 = 13.02/45.82 \times 100 = 28.4\% \\
Z &= 1.505 \\
E_1 + (E_1 A) \times Z &= \$13.02 + (13.02 \times .28) \times 1.505 = \$29.08^{3/}
\end{aligned}$$

### 3. The California Desert

If the assumption is made that the average travel distance remain fairly constant per RV recreational trip, the following analysis is possible. Based on an estimated 11,336,000 V.U.D.'s to the California Desert in 1973, it follows that:

11,336,000 V.U.D.'s/24 V.U.D.'s = 472,333 individual family or group visits made to the California Desert

Assuming 70 percent ORV oriented and 100 percent use of national resource lands:  $472,333 \times .70 \times \$29.08 = \$9,614,810$

Thus RV recreationists will contribute over 9 million dollars to local economies within the California Desert area.

-----  
3/ One family outing consisting of 24 V.U.D.'s will contribute \$29.08 to a local community or county. As previously stated, this will depend on total travel distance. In the previous example the average travel time from metropolitan centers was 4.1 hours. Increased travel time will increase total expenditures changing the ratio of  $E_1$ .

### III. SOCIAL BENEFITS OF RV RECREATION

#### A. INTRODUCTION

Conflicting opinions exist on the extent and type of benefits obtained from participation in RV activities.

Sociologists generally agree that our society lives under the constant pressure of emotional stresses and strains, unknown at any previous time in history (Clawson 1966). The American citizen is able to consume more and to live better, but his life is a far more ordered one. In this generally ordered life, recreation in general and outdoor recreation in particular stand as opportunities for free choice.

Many sociologists, and psychologists stress the psychological and emotional need for outdoor recreation. Some stress that, in outdoor recreation, the individual can test his physical fitness and his ability to cope with nature. Recreation is also considered to have significant value in combating or preventing juvenile delinquency.

Some sociologists disagree. Few argue with the proposition that serious emotional and nervous tensions exist today, but they say that a substantial proportion of the population apparently rarely engages in outdoor recreation. They also argue that it is the well adjusted, not the ill-adjusted, who both experience outdoor recreation and gain most from so doing.

The only quantifiable "social" benefits identified are related to demand. When people are free to choose how they will spend their time and money, many will choose outdoor recreation. By their actions, they make it clear that they value recreation highly. If the demand and need approaches are not in conflict - some correlations might be drawn.

#### B. IMPACTS ON THE RV RECREATIONIST

Efforts to quantify the social impacts resulting from restricting RV activities are inconclusive. The complexity of psychological impacts or RV recreation become obvious when efforts were made to identify specific values. Dr. Robert M. Schneider, (1973) Professor of Behavioral Sciences at California State Pomona, indicated that one of the major attractions, common to all forms of outdoor recreation, is the reduction of role expectation pressures. Dr. Schneider indicated that the most common reason given for outdoor recreational activities is "getting away from it all." He feels that the real reason is not getting away from people, but rather escaping the daily routine and familiar people. In an outdoor situation we can have interactions with people, and not be as conscious of the role expectation of our day to day lives. That is, in an outdoor situation the recreationist can interact with other people without getting overly involved with them.

Dr. Schneider feels that the recreational emphasis on vehicles, particularly recreational vehicles among males, is related to the lessened ability of males in today's society to prove or demonstrate masculinity. Related to this is the need for excitement and adventure. Dr. Schneider points out that these factors are quite important to mental health.

Professor Duane R. Johnson, (1973) sociologist from Northern Illinois University feels that the challenge offered from off-road recreation in interactions between mind, body, machine and the environment, is an effective means of relaxation. He feels that many social tensions are relaxed.

The Los Angeles YMCA in cooperation with Honda motorcycles is developing a program, in which teenage problem children are taught to ride motorcycles. The program has met with great success. Juveniles with records, and who have broken probation, now stay on probation and stay out of trouble.

#### C. EXPRESSED SOCIAL VALUES OF M.C. COMPETITION

An independent study, conducted for the Bureau by Mrs. Cherry Stockton, an ergonomist and motorcycle enthusiast and Mr. Albert Buck, a motorcycle cinematography consultant, produced interesting insights into social values attained from competitive events. Mr. Buck and Mrs. Stockton interviewed 100 desert motorcycle competition riders and 50 motocross riders to quantify social values obtained from competitive motorcycle racing. Mrs. Stockton holds an M.A. in ergonomics while Mr. Buck is president of Al Buck Films, producers of motorcycle racing films. The work was conducted on a voluntary basis. The entire report is presented in Appendix I.

The sample of desert racers cannot be statistically validated but there is no specific reason to believe that this sample does not represent competitive riders in general. The data was not collected by professional sociologists, but rather by individuals, directly involved in competitive racing at either the participant or commercial level.

#### D. SUMMARY OF EXPRESSED SOCIAL BENEFITS

The average desert motorcyclist is nearly 32 years of age and has ridden for approximately 9 years. Nearly 70 percent of his riding activities are competitively oriented. Over 93 percent of his riding is done with club members, friends or family. He indicates that over 93 percent of his riding is done on public land.

The sampling of desert motorcyclists identified the following relationships or social benefits obtained from the interaction of competitive riders with their families and peers:

1. Ability for all age groups to adjust, living closely together while camping.
2. Increases ability and willingness to relate different experiences, and understand other people's life experiences.
3. Bringing people together from highly divergent backgrounds and allowing interactions, which develop tolerances and understanding for other viewpoints and philosophies of life.
4. The interaction and participation in an activity where similar interests exist has a tendency to bring out the "best" instincts within an individual. This is expressed in a willingness to offer assistance to individuals one may not be acquainted with.

When asked if motorcycle recreational activities had discontinued or lessened involvement with drugs, alcohol, or other illegal activities, 34 percent indicated that it had. Desert riders indicated certain emotional benefits derived from their activities, and as feelings of freedom, release of aggressions, and feeling of physical accomplishment, among others. They felt that these factors had helped reduce their dependence on alcohol or drugs.

When asked what things and/or feelings kept him involved with his sport, the motorcyclist indicated feelings of group-family togetherness as being the prime motivation.

When comparing the desert competitive rides with the motorcross riders, who only does 19 percent of his riding on the public lands, some interesting differences are found.

The motorcross rider does most of his riding in commercial RV parks (68%). They are also younger (average 18.6 years of age) and have ridden for only 5 years. When the reasons for participating and the emotional stimulation received were analyzed, the responses were much the same for both groups.

It is not possible to adequately analyze the social impacts of off-road recreation. There has not been sufficient research to allow identification of either positive or negative social benefits of the activity. It is generally felt that recreation is needed for both mental and physical health. Based on the limited "opinion sample" conducted for the purpose of this report and the numerous adamant proponents of RV recreation, together with the increasing popularity of the activity in California, RV recreation must satisfy certain social needs. Social impacts and the question of externalities should be a subject of further research.



#### IV. THE RECREATIONISTS' PREFERENCES WHEN CHOOSING AN AREA TO OPERATE HIS RV

##### A. RECREATION VEHICLE USE

Recreation vehicle (RV) recreationists are as diverse in their preference for use areas and the activities they participate in as are the variety of vehicle they use. This is important because personal interests, types of vehicles and uses of the RV may influence land travel patterns and attitudes toward the landscape traveled.

Three "orientation types" of RV recreationists can be identified - activity, vehicle and land oriented (Peine 1972). For the vehicle oriented recreationist, the vehicle is an end in itself. Interests lie with the competitive or mechanical aspects of the machine. The activity oriented recreationist uses his vehicle as a means to an end. His vehicle is used as a means of transportation to an area where he can participate in his singular activity. The land oriented category represents by far the majority of RV recreationists on the national resource lands of California. For this orientation type, the vehicle probably draws some interest but the recreational attraction is in some elements of the landscape, such as scenery or remoteness. In general, the land oriented RV recreationist will pursue a larger variety of recreational activities than the activity oriented recreationist.

##### B. AREA ATTRACTION FACTORS

Following the preceding hypothesis that three ORV orientation types exist and that each type, based on activity preferences and vehicle type, are looking for specific combinations of site characteristics, it is possible to develop these characteristics and use them to rate a potential RV area. Stated another way, the RV recreationist looks for specific aspects of the landscape when choosing an area in which to pursue a particular off-road activity. His recreational goals will determine the characteristics he will seek in an area. If these "attraction factors" are determined and listed in order of relative importance to each other, they can be used to determine the potential experience an RV recreationist might derive from visiting an area.

With this goal in mind, RV clubs, associations and vehicle manufacturers and distributors as well as non-RV oriented groups, such as Sierra Club, Desert Beautiful, etc., were contacted. Officers within these groups were presented with the relevant questionnaire depicted in the Appendix and asked to rate the "area attraction factors" by relative importance to each. The results of over 5000 marketing research questionnaires representing numerous studies conducted by RV manufacturers and distributors were utilized to represent the opinions of the non-organized RV recreationist. The development of the "area attraction factors" depicted in Table XI depicts the represented opinion of over 60 thousand RV recreationists from all orientation types. The derivatives of each attraction factor is based on the definitions given in Table XII.

### C. TRAVEL TIME

Reference to Table XIII indicates that travel distance is only of moderate importance to the RV recreationist when choosing an area for his recreational activities. Generally, the RV recreationist has a specific area in mind when planning an RV trip. Further analysis of time-distance interrelationships and the choosing of new areas indicate that some relationship between travel time and RV orientation type should be developed.

Several relationships between average and acceptable travel time could be developed. In most cases the variables are vehicle or activity preference and available time. The RV recreationists willingness to travel is dependent on the variables listed below.

1. Type of vehicle, 4-WD, Dune Buggy or Motorcycle.
2. Type of terrain most preferred, sand dunes, etc.
3. Family involvement with the RV activity.
4. Orientation type.

After a careful analysis of available data relating to the California RV recreationists it was determined that RV orientation type would be the most logical variable to use when determining the importance of travel distance when choosing an area. Analysis of the California State Park Study of dune buggy and motorcycle owners and a study by Dr. John Peine at the University of Arizona in Tucson. indicates that willingness to travel varies with vehicle type and the recreationists activity patterns. These two factors are most easily identified to RV orientation types (Peine 1972).

This can be more directly understood when considering the method of transportation used to get the RV to its intended use site. Only 12 percent of motorcycle and dune buggy owners use the vehicles own power to arrive at the use area. Most motorcyclists transport their vehicle to the use site by van or truck while 90 percent of the dune buggy owners sampled in the California State Park study transferred their vehicle to the use site by trailers. Nearly all four-wheel drive owners use their four-wheel drive vehicle to arrive at the use site. Table XIII presents average and maximum travel times associated with each ORV orientation type.

### D. RATING OF RV POTENTIAL EXPERIENCES USING "AREA ATTRACTION FACTORS"

The following technique was developed to rate the impact of opening, closing or restricting RV use within a specific area. The technique is designed to rate the "quality of experience" an RV recreationist might expect under the three possible designations called for under E.O. 11644.

TABLE XI  
AREA ATTRACTION FACTORS  
 (Listed in Order of Importance)

ORV RECREATION/1 ORIENTATION TYPE

VEHICLE

- Size of area where ORV can be used.
- Opportunity to test vehicle performance against another vehicle.
- Good opportunity to travel cross-country without trails.
- Number and degree of restrictions within area.
- Area rugged with challenging terrain features.
- Scenic appeal of area.
- Travel distance to area.
- Existence of roads and trails.

LAND

- Area rugged with challenging terrain features.
- Scenic appeal of area.
- Feeling of remoteness.
- Number and degree of restrictions within area.
- Size of area where ORV can be used.
- Travel distance to area.
- Good opportunity to travel cross-country without trails.
- Existence of roads and trails.
- Existence of specific attractions such as historic sites, etc.
- Opportunity to test vehicle performance against another vehicle.
- Degree of development (existence of camp facilities, etc.).
- Degree of existing damage because of previous mining, grazing or vehicular use.

ACTIVITY

- Existence of specific attractions such as historic sites, etc.
- Existence of roads and trails.
- Travel distance to area.
- Degree of existing damage because of previous mining, grazing, or vehicular use.
- Degree of development (existence of camp facilities, etc.).
- Scenic appeal of area.
- Feeling of remoteness.

TABLE XII

AREA ATTRACTION FACTORS

DEFINITION

1. AREA RUGGED WITH CHALLENGING TERRAIN FEATURES:

Consider steepness and length of slope. The most important consideration is the challenge offered the ORV recreationist in negotiating the area. Off-road vehicle recreationists consider any slope 50-60% too steep.

Minimum Standards: Slopes or trails easily negotiable by 2-wheel drive vehicle.

2. SCENIC APPEAL OF AREA:

For an area to be attractive to an ORV recreationist other than the strictly vehicle (competitive) oriented, the terrain must have vegetative cover and have elevation variations of at least 200 feet. Scenic appeal is very closely related to the desire of the ORV recreationist to explore with his vehicle. The more topographic relief and vegetation within an area the more conducive it is to exploration.

Minimum Standards: Area must have vegetative cover other than low desert plants. Area must exhibit some landscape relief.

3. FEELING OF REMOTENESS:

The ORV recreationist defines remoteness as an absence of evidence of human habitation and recent culture. A remote area is simply out of sight and sound of major state highways, well traveled roads, residences and communities. A popular and heavily used ORV area may actually give the ORV recreationist a feeling of remoteness. Stock tanks, abandoned mines, fences, ghost towns, etc. do not detract from and may actually contribute to this feeling of remoteness.

Minimum Standards: Absence of sight or sound of a state or interstate highway or established community.

4. NUMBER AND DEGREE  
OF RESTRICTIONS:

This factor relates to the number of actual barriers to freedom of movement of the ORV through an area. This may refer to private lands, fences or restrictions based on management objectives.

Minimum Standards: No minimum standards could be identified for this factor.

5. SIZE OF AREA:

The California Association of 4-WD Clubs has identified three general types of areas, Urban, Rural and Back Country. The differentiation between these areas is based on relative proximity to population centers and size. The first two areas vary in size from 30 to 300 acres and would correspond very closely to motorcycle parks. The major activity within these areas is vehicle performance testing. The third type of area referred to by the ORV recreationist as "back country" would most likely be the type of area identified as BLM administered lands. When looking for a "back country" experience, the ORV recreationist is generally looking for a "new" area to visit. Paradoxically, the ORV recreationist tends to frequent the same area several times. When asked to explain this, the ORV recreationist indicated that the larger the area and the greater the topographic relief, the more chance there is for him to visit a "new" place.

Minimum Standards: To qualify in size, an area must be 5000 acres with an elevation difference of at least 200 feet.

6. TRAVEL DISTANCE TO AREA:

ORV recreationist response to this factor was time required to reach the area. The travel expressed in Table XVIII should be used to evaluate this factor.

7. GOOD OPPORTUNITY TO TRAVEL CROSS-COUNTRY WITHOUT TRAILS:

The off-road recreationist, especially the motorcyclist and dune buggy owner, has a definite desire to travel cross-country without a trail. The off-road recreationist measures an area's quality for cross-country travel by the amount of relatively unvegetated area available. He is specifically looking for sand dunes, washes and dry river beds for this activity.

Minimum Standards: Presence of landscape of a sizeable dry river bed, wash, or tract of land with little vegetation.

8. EXISTENCE OF ROADS AND TRAILS:

The larger the percentage of a specific area that is accessible by an existing road or trail the higher that area will rate with the ORV recreationist.

Minimum Standards: Sufficient trails available to allow vehicle access to all major portions of the land area.

9. EXISTENCE OF SPECIFIC ATTRACTIONS SUCH AS HISTORIC SITES, ETC.:

A specific attraction is viewed by the ORV recreationist as simply a place to go. Off-road vehicle recreationists enjoy driving to something: a natural waterfall, a stream, a grove of cottonwood trees, a ghost town, an abandoned mine, etc. The more specific attractions that can be identified within an area, the higher it should rate.

Minimum Standards: At least one point of interest per area.

10. OPPORTUNITY TO TEST  
VEHICLE PERFORMANCE  
AGAINST ANOTHER  
VEHICLE:

This is especially significant when rating sand dune areas. The area must offer opportunity for hill climbs and sand drags. A hill suitable for hill climbs must be at least 150 yards long offering expanse enough for two vehicles to compete. Sand drags are usually for 100 yards where the terrain must be relatively level.

11. DEGREE OF DEVELOPMENT  
(existence of camp  
facilities, etc.):

The existence of facilities is of minor importance to the ORV recreationist. Those facilities considered important by ORV recreationists who desire development in an area are, in order of importance: (1) sanitary facilities, (2) drinking water, (3) parking area, (4) camping facilities, and (5) shade.

Minimum Standards: None

12. DEGREE OF EXISTING  
DAMAGE BECAUSE OF  
PREVIOUS MINING,  
GRAZING, OR VEHICULAR  
USE:

This factor is relevant only to activity oriented ORV recreationists. In general, this factor considers tire tracks off of trails, vegetation damage due to ORV and general esthetic detractions due to resource damage.

TABLE XIII  
WILLINGNESS TO TRAVEL

<u>ORV ORIENTATION TYPE</u>	<u>A V A I L A B L E   T I M E   (D A Y S)</u>		
	<u>ONE DAY</u>	<u>TWO OR THREE DAYS</u>	
	<u>Average Travel Time Hours</u>	<u>Average Travel Time Hours</u>	<u>Maximum Travel Time</u>
VEHICLE	1.3	3.6	6.2
ACTIVITY	1.3	3.2	5.6
LAND	1.4	3.9	6.0



## 1. RV Experiences

### a. Rating by RV orientation types and attraction factors.

A formula was used to calculate the relative impact of vehicle use designations on RV orientation types and attraction factors. The numerical representation of relative impacts was only used to guarantee internal rating consistency. The numbers are not intended to be a statistically valid representation of RV recreationists' interests.

The formula is most easily understood by following an example. An example of the calculating of RV experience impact scores for "vehicle RV orientation" in an "open" vehicle use designation follows:

(1) Step 1: Each area was subjectively rated as high "3", medium "2", or low "1" value for each attraction factor. (The attraction factors are defined in Table XI.)

VEHICLE	Impact Rating (Step 1)	Importance Ranking Weight (Table XIV)	Final Score (Step 2)
1. Size of area where ORV can be used.	2	3	6
2. Opportunity to test vehicle performance against another vehicle.	2	3	6
3. Good opportunity to travel cross-country without trails.	1	2	2
4. Number & degree of restrictions within area.	1	2	2
5. Area rugged with challenging terrain features.	3	2	6
6. Scenic appeal of area.	3	1	3
7. Travel distance to area.	1	1	1
8. Existence of roads and trails.	3	1	3
Total Impact Score			29

(2) Step 2: Multiply the subjective impact rating (step 1) times the importance ranking weight (from Table XIV) to obtain the impact scores for each attraction factor. Then add these scores to obtain the total impact score.

(3) Step 3: Compare the total impact score against other totals to the proper column in Table XV to obtain a high, medium or low impact rating. In this example the total impact score of 29 rates a "medium" under the vehicle orientation column.

(4) Step 4: Calculate relative impacts for each vehicle use area, vehicle use designation, and orientation type in the same procedure as in the example above.

Weighted Area Attraction Factors by ORV Recreational Orientation Type  
(listed in order of importance).

ORV RECREATIONAL ORIENTATION TYPE			
VEHICLE	Importance Ranking Weight	ACTIVITY	Importance Ranking Weight
1. Size of area where ORV can be used.	3	1. Existence of specific attractions such as historic sites, etc.	3
2. Opportunity to test vehicle performance against another vehicle.		2. Existence of roads and trails.	
3. Good opportunity to travel cross-country without trails.		3. Travel distance to area.	
4. Number and degree of restrictions within area.	2	4. Degree of existing damage because of previous mining, grazing, vehicular use.	2
5. Area rugged with challenging terrain features.		5. Degree of development (existence of camp facilities, etc.).	
6. Scenic appeal of area.		6. Feeling of remoteness.	
7. Travel distance to area.	1	7. Feeling of remoteness.	1
8. Existence of roads and trails.			

TABLE XV

RV AREA RATING SCORES\*

Calculated by totaling all the scores of attraction factors present times their relative weight.

	<u>Vehicle Orientation</u>	<u>Activity Orientation</u>	<u>Land Orientation</u>
High	36-48	35-45	58-75
Medium	25-35	24-34	41-57
Low	15-24	14-23	24-40

\*Scores were determined by totaling maximum possible score and arbitrarily dividing by 3 to determine the range within each vehicle use designation. The numbers are of value only to assure internal consistency.

V. RECREATIONAL VEHICLE USERS EXPERIENCE PREFERENCE BY VEHICLE AND ORIENTATION

A. TYPE

Tables XVI and XVII represent activity preference by vehicle type and order of preference by orientation type respectively. As indicated by comparing these tables, the motorcyclist seems to be the more vehicle oriented while the four-wheel drive vehicle owners are more likely to be land and activity oriented. The dune buggy owner is more likely to be vehicle oriented than is the four-wheel drive owner. Also, sightseeing, camping, etc. are far more attractive to the four-wheel drive and dune buggy owners.

B. RV RECREATIONAL PARTICIPATION CHARACTERISTICS BY VEHICLE TYPE

1. Motorcycle

From 30 to 40 percent of all motorcycle owners recreational activities include other family members. Only 6 percent of the time does he ride alone. For those motorcyclists who ride with their family, 58 percent include the entire family. If the entire family is not included, the son or wife is most likely to be riding with the family head (Honda et al 1973). A recent study conducted by the California Department of Parks and Recreation (1972) indicated that the average motorcycle owning family owns 1.2 vehicles.

The average motorcyclist seldom uses the desert for less than 2 consecutive days. Table XVIII indicates that as available time increases so does the RV recreationists' willingness to travel. If less than one day is available, the average recreationist sampled in the State Park Study will travel little more than 1 hour to reach a use area. The study also showed that popular use areas are seldom close to population centers and, only 12 percent of motorcycle owners ride their vehicle to the use area.

The average motorcycle operating time is about 5 hours per day (Table XIX). Interestingly, 45 percent of the sampled did not operate their motorcycles on weekdays. Those who do operate on weekdays spend an average of 1.8 weekdays per month and only 2 hours per occasion.

2. The Four-Wheel Drive Recreationist

The four-wheel drive owning recreationist is far more family oriented than is the motorcyclist. Only 7 to 12 percent do not recreate with their family. In most cases, the entire family participates, but if not, the most likely passenger is the wife or son (Chevrolet et al 1973).

The California Association of 4-WD Clubs' report indicates that trends of use vary from region to region. In general, use trends are dependent on nearness to the use area. Using a concentric circle approach, based on data taken from "Area Use Forms" completed for the association by its members, certain relationships were developed. Eighty-five percent of the RV activities take place within 100 miles of the major population concentrations. Add 25 miles and an additional 9 percent is gained. Within 150 miles of the major population concentrations, 96 percent of the association's RV recreational activities occur.

For those who live in small communities and closer to use areas, patterns differ. Over 60 percent of their outings are one day in length and their travel distance is less than 100 miles from home. The remaining 40 percent of their outings require greater travel distance. The general trend is for the city dweller to travel further than those RV recreationists living in more remote communities.

With regard to other recreational vehicle ownership, the California Association of 4-WD Clubs' report indicates that 16 percent of their members own a pickup and 32 percent own trail bikes.

### 3. Dune Buggies (Reconstructed Vehicles)

Very little data is available regarding activity patterns of the dune buggy owner. Available information indicates that they enjoy activities and look for area characteristics similar to the vehicle and land oriented RV types.

Nearly 90 percent of the Dune Buggy owners recreational activities occur with a family member. Reference to Table XVI indicates that dune buggies are used heavily for camping, back-country exploring and sightseeing. It should be noted that their owners are more interested in competition and less likely to use the vehicles in activity oriented recreational activities than are the four-wheel drive vehicle owners (Hamm 1973).

Participation patterns for the dune buggy enthusiast, as identified by the State Park Study, indicates that he is willing to travel greater distances to participate in his activity than other RV recreationists. The study indicated that the San Diego area has a disproportionately higher number of registered dune buggies.

The dune buggy owner is looking for sandy soil which is rare and localized in the desert. His average travel time to reach such an area is 3.1 hours and his average operating time per day is 6.6 hours. The dune buggy is also rather unique in that over 90 percent are towed to the use site by trailer. They are also equipped with lights for use at night.

#### 4. Competitive Events

In 1972 the Bakersfield and Riverside Districts issued a total of 151 special land use permits for RV competitive events. Over 67,000 participants and nearly 190,000 spectators were involved in these events.

There are two general types of competitive events for which Special Land Use Permits (SLUP's) are issued. The majority of the SLUP's issued were to non-profit clubs and organizations. Nearly 68 percent of all SLUP's issued for competitive events are to non-profit clubs.

Unlike events hosted by non-profit clubs and organizations, professional promoters make all or part of their living by charging participants for entering the event, paying winners a portion of the purse, and keeping the remainder for operating expenses and profit. Thus, they have much to lose if competitive use were curtailed. Applications received indicate that 49 permits will be issued for this type of event in 1973. This is an increase of over 40 percent from the previous year. Applications for RV events are increasing at a rate in excess of 30 percent per year. Irrespective of the popularity of organized competitive RV events, compared to the total RV recreational picture, they represent less than 10 percent of RV activities.

TABLE XVI

## RV RECREATIONISTS ACTIVITY PARTICIPATION IN CONJUNCTION WITH VEHICLE

<u>Activities</u>	Percent <sup>1/</sup> Participation <u>4 WD Owners</u>	Percent <sup>2/</sup> Participation <u>Dune Buggy Owners</u>	Percent <sup>3/</sup> Participation <u>Motorcycle Owners</u>
Hunting	32	15	15
Fishing	28	2	14
Camping	89	99	39
Rockhounding	13	10	—
Sightseeing	82	99	49
Competition	33	45	53
Back Country Exploring	89	99	—
No interest in competition	—	—	47

1/ Chevrolet et al., 1973

2/ Hamm 1973

3/ Honda et al., 1973



TABLE XVII

ACTIVITY PARTICIPATION BY ORV ORIENTATION TYPE ORDER OF PREFERENCE IN CALIFORNIA

<u>Activities</u>	<u>Vehicles</u>	<u>Activity</u>	<u>Land</u>
Hunting	5	7	5
Fishing	6	6	6
Camping	4	2	2
Rockhounding	—	1	7
Sightseeing	3	3	3
Competition	1	8	4
Back Country Exploring	2	4	1
Other	7	5	—

- Sources:
1. Manufactures and Distributors of RV, including Honda, Kawaski, Yamaha, Suzuki, Ford, G.M., American Motors and International.
  2. Personal interviews with representatives of RV clubs and associations and non-RV clubs and associations who were likely to be activity oriented.

TABLE XVIII

NORMAL VS. REASONABLE ONE-WAY TRAVEL TIME TO USE AREA

<u>Available Time</u> <u>Hour</u>	<u>Less Than A Day</u>		<u>One Full Day</u>		<u>Two Or Three Days</u>	
	<u>Normal</u>	<u>Reasonable</u>	<u>Normal</u>	<u>Reasonable</u>	<u>Normal</u>	<u>Reasonable</u>
Up to ½	32	36	9	8	4	3
½ to 1	27	30	15	24	3	5
1 to 2	15	14	36	36	13	22
2 to 4	5	3	18	10	38	36
4 +	1	1	1	1	19	13
No/ans	20	16	21	21	23	21
Total	100%	100%	100%	100%	100%	100%

Source: "Off-Highway Vehicle Use Survey," Statewide Studies Section, California Department of Parks and Recreation 1972.

TABLE XIX

## AVERAGE DAYS AND HOURS OF RV OPERATION PER MONTH

Days/Month No. Days	Weekend Days		Hours Per Day	
	Sat	Sun	Number	Response
0	1	1	0	0
1	19	18	1	1
2	28	27	2	4
3	11	12	3	7
4	12	16	4	14
5-6	3	4	5-6	34
7-8	1	1	7-8	18
8 +	1	1	9-10	7
No/Ans	24	20	10 +	3
			No/Ans	12
Total	100%	100%	Total	100%

Source: State Park Study, 1972.

## VI. FUTURE OF RV RECREATION IN CALIFORNIA

Obviously, future growth of RV recreational activity will have a major impact on the environment. A projection of demand may indicate the need for more open areas or possibly use areas with different characteristics to satisfy divergent activity orientation types. Estimates of future use can be based only on experience. Unfortunately in the case of off-road recreation, existing knowledge of the past and present is incomplete.

### A. FACTOR OF GROWTH

Recreation vehicular recreation is very popular in southern California (estimated 8 million V.U.D.'s in 1973), and has grown at from 7 percent to 9 percent annually.

Existing use of the California Desert may not be an adequate measure of future use. Existing use is more a function of opportunity than actual demand. Any changes in opportunity, as exemplified by the recreation vehicle management program, could have explicit effects on the RV recreational activity.

### B. PROJECTIONS

Extrapolation of past and current trends in RV recreation into the future is often useful, but it can also be unreliable and misleading. If the present RV sales increase from 7 percent to 9 percent per year and extended into the future, the present number of RV's will double in from 10 to 14 years and continue doubling at each 10-year interval. A projection of this magnitude offends common sense.

There are several causal factors which might influence growth of the RV recreational activity. Socio-economic factors such as population, amount of available leisure, income, etc. are among the more important. Any projection attempt must consider these factors.

To arrive at a judgment of future demands for RV recreation activities other factors must also be considered. These include: (a) historical and recent past trends, (b) probable future desires, (c) probable future capacity of the general public to participate in the RV activity, (c) the capacity or supply of areas on which the desired RV activity can be carried on (Clawson 1966).

#### 1. Analysis of Causal Factors Concerning RV Growth in Southern California Population

Population and the percentage of that which is urban are important variables associated with recreation demand. With regard to RV recreation, age distribution may also be important.

In 1970 over 11 million people lived in the counties comprising and surrounding the California Desert. Population growth in this area has been over 300 percent from 1950 to 1970 and 53 percent from 1960 to 1970. Around 93 percent of this population is urban. Medium age is between 24 and 29 years with 35 percent of the population under 18 years of age. The average off-road motorcycle rider or four-wheel drive vehicle owner in California is probably under 34 years of age. Population increases and age categories would seem consistent with increased growth of RV recreation.

#### Available Leisure:

The average worker in California has around 121 days off from work each year (Isley 1973). The actual number of days off are no more important than the blocks in which they come. There are four federal holidays and several state holidays comprising numerous 3-day weekends. This does not include other major holidays which encourage extended trips popular with RV recreationists. The average RV household sample spends two weekends per month participating in RV activities (State Park Study 1972).

#### Income:

It is generally felt that income is of considerable importance in determining recreation participation, and it is highly probable that different economic demand curves exist for each major income group. Per capita income for California increased 57 percent between 1960 and 1970 (U.S. Census 1970). Per capita increases for those counties from which the majority of RV recreationists originate averaged 71 percent over the same period of time. The median income of the California family was \$10,732 in 1970. The median income of the four-wheel drive owning family was \$15,613 (PV4 Magazine 1973) while the average income for the motorcycle owning family was between \$10 and \$15 thousand annually (Honda *et al* 1973). The initial cost of an off-road vehicle and subsequent operating and participation costs make RV recreation highly income elastic.

#### Trends:

As previously stated, sales of RV's have increased an average of from 7 to 9 percent per year since 1969. Growth, based on motorcycle registration prior to 1969, was of even a greater magnitude. Membership in off-road vehicle clubs such as the California Association of 4-WD Clubs is increasing from 15 to 19 percent per year while consumer spending on motorcycles increased 20 percent between 1970 and 1971. Based on average figures concerning the number of motorcycles per capita (nationally 1 motorcycle per every 10 families vs. southern California 1 motorcycle for every 3.3 families), consumer spending in

southern California is significantly greater than the national average. California residents buy nearly 15 percent of all recreation vehicles sold in the United States and represent less than 10 percent of the nation's population (Recreation Vehicle Marketing Report 1972). The trend seems to be toward a more vehicle oriented society.

## 2. Probable Future Desires

Unfortunately few studies exist that might hint at future demands, based on simple desire for RV recreation. Many recreation planners feel that a physical and psychological need is being met through RV activity. Others feel it is simply a fad that will soon disappear.

In southern California recreational activities revolving around off-road vehicles has grown much faster than elsewhere in the U.S. This is probably due to the availability of vast expanses of public land relatively near large metropolitan areas. If all economic conditions and the availability of use areas were to remain constant, the growth of the popularity of RV's for recreational purposes would probably continue to grow, at least in the short run.

## 3. Probable Future Capacity of the General Public to Participate in the RV Activity

The present inflation trend will reduce the amount of discretionary income available for recreational purposes. Since recreation is relatively income elastic, change in income will cause a greater than proportionate change in the amount of income spent on recreational activities. The present inflationary trend in the U.S. could reduce the amount of RV recreational use. In combination there is the present energy shortage reducing the amount of fuel available and the possibility of more stringent anti-pollution requirements on motorcycles.

These restrictions together with less permissive land management practices by the public land managing agencies could combine to reduce the popularity and ability of the public to participate in RV recreational activities.

## 4. Capacity or Supply of Areas on Which RV Activity Can Be Carried On

A factor which might effect supply of areas for RV recreation is the degree of substitution between use areas and the possibility of a shift in interest within RV orientation types. All recreation areas, and in some cases, activities, are in varying degrees substitutes for one another; the use of one RV area, may be conditioned by the existence, characteristics and management regulations existing within another. It

is also possible that as recreation vehicle recreation intensifies within an area, a shift will develop in the type of individual involved in the activity. There may also be a shift in activity preference. For instance, the land oriented recreationist of the future may be content with a lesser degree of remoteness than is the standard for the present vehicle user. The future vehicle oriented user may be satisfied with less landscape over which to travel. In general, concentrated use could cause a shift away from the land oriented recreationist to the vehicle oriented (Peine 1972).

These factors could influence off-road vehicle activity preference. This shift would alter required attraction factors within an RV area making it more or less attractive to RV recreationists of a particular orientation type. Nevertheless, the general consensus among RV recreationists is that more and more open and unrestricted use areas are needed.

### C. SUMMARY

When viewing the future of off-road recreation, the major restraining factors are the unknown degree of continuing desire for the activity and governmental restriction imposed to protect natural resources, reduce air pollution, and possible energy shortages.

The motorcycle industry does not hesitate to admit that sales are down from the boom years of 1968 and 1969. They continue to express optimism and develop new products with the hope of keeping the market alive. The consensus within the motorcycle industry is that growth will continue at a decreasing rate.

In 1973 the four-wheel drive industry felt that they were in a better position for future growth. The expansion of vehicle oriented recreation in California supported their optimism.

The unforeseen energy crunch will certainly effect the ability of the RV recreationist to participate in his activity. Whether it will completely stop participation, simply reduce it or completely change the characteristics of the activity is unclear. It seems unlikely that the RV recreationist will be completely deterred from his sport. A reduction in the number of trips per year seems the most likely result of the fuel shortage and the resultant high prices. A preliminary analysis of the impact of the fuel shortage on desert recreation in general, indicates that use has decreased only slightly. Aerial flights designed to collect visitor use data indicate that use has fallen off less than 10 percent over the same period in 1973 prior to the shortage. This is due to the relative availability of fuel in or near traditional heavy use areas. Unless the supply of fuel is sharply curtailed within these areas, little change in the intensity of visitor use on the California Desert is likely to occur.

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A P P E N D I X

# PART I

## OFF-ROAD RECREATIONISTS PROFILE

The intent of the data gathered through this questionnaire is to develop a socio-economic profile of the ORV recreationist. Please answer these questions as specifically as possible. Where a specific answer is not possible, your best "estimate"\* should be given. If the marketing data your company has collected does not fit the format of the questionnaire, please present it in any form convenient. If the data is not available for off-road recreational use, please give total figures accompanied by and appropriate estimate of that which is ORV.

### DEMOGRAPHIC CHARACTERISTICS OF OFF-ROAD VEHICLE BUYERS

1. Sex: Male \_\_\_\_\_% Female \_\_\_\_\_%

2. Marital Status: Single \_\_\_\_\_% Married \_\_\_\_\_%

3. Age:	Number	%
18 - 25	_____	_____
26 - 34	_____	_____
35 - 44	_____	_____
45 - 54	_____	_____
Over 55	_____	_____

4. Approximate Family Income:	Number	%
Under \$5000	_____	_____
\$5000 - 7999	_____	_____
8000 - 9999	_____	_____
10,000 - 14,999	_____	_____
15,000 - 19,999	_____	_____
20,000 - 24,999	_____	_____
25,000 & OVER	_____	_____

\*Please indicate if an "estimate" is used by placing an "E" beside data given.

5. Last School Attended:	Number	%
Grade School	_____	_____
High School	_____	_____
Trade School	_____	_____
College	_____	_____
Post Graduate	_____	_____
6. Occupation:	Number	%
Labor	_____	_____
Semi skilled/skilled labor	_____	_____
Service worker	_____	_____
Technical	_____	_____
Sales	_____	_____
Clerical	_____	_____
Mgt/Proprietor	_____	_____
Professional	_____	_____
Retired	_____	_____
Not employed	_____	_____
Student	_____	_____
Other	_____	_____

## PART II

### RECREATION PARTICIPATION PROFILE

7. While using the ORV does the ORV recreationist carry a passenger?

Yes \_\_\_\_\_%      No \_\_\_\_\_%

Who is the passenger?      Family member \_\_\_\_\_%  
    Non-family \_\_\_\_\_%

8. During his off-road recreational activities, are there other vehicles with him and if so, who?

	Number	%
Alone	_____	_____
Family member	_____	_____
Non-family	_____	_____

If accompanied by family member which member of the family is it?

	Number	%
Wife	_____	_____
Son (s)	_____	_____
Daughter (s)	_____	_____
Entire family	_____	_____
Other	_____	_____

9. Which of the following recreational activities do ORV recreationists use their vehicle in conjunction with?

Activities	Number	%
Hunting	_____	_____
Fishing	_____	_____
Camping	_____	_____
Rockhounding	_____	_____
Sightseeing	_____	_____
Competition	_____	_____
None	_____	_____
Other	_____	_____

10. What recreational vehicles does the ORV recreationist or members of his family own?

Recreational Vehicles	Number	%
Boat	_____	_____
Camper/Truck	_____	_____
Camp trailers	_____	_____
All terrain vehicle	_____	_____
Dune buggy	_____	_____
Snow mobile	_____	_____
Four wheel drive	_____	_____
None	_____	_____
Other	_____	_____

### PART III

#### OFF-ROAD VEHICLE USE PREFERENCE

11. Using marketing surveys your company may have conducted, please indicate by estimated percentage or order of preference the relative importance of the following factors in developing or designating an area for ORV recreation.

1. Number and degree of restrictions within an area	_____
2. Size of area	_____
3. Existence of roads and trails	_____
4. Travel distance to area	_____
5. Degree of development (existence of facilities)	_____
6. Scenic appeal of area	_____
7. Sense of remoteness	_____
8. Area rugged and challenging to negotiate	_____
9. Degree of existing damage because of previous vehicular use.	_____

PART IV  
MARKETING STATISTICS

12. Estimated number of units your company has marketed in California:

YEAR	NUMBER	*ESTIMATED% SO. CALIFORNIA	ESTIMATED % USED OFF-ROAD
1940	_____	_____	_____
1950	_____	_____	_____
1960	_____	_____	_____
1961	_____	_____	_____
1962	_____	_____	_____
1963	_____	_____	_____
1964	_____	_____	_____
1965	_____	_____	_____
1966	_____	_____	_____
1967	_____	_____	_____
1968	_____	_____	_____
1969	_____	_____	_____
1970	_____	_____	_____
1971	_____	_____	_____
1972	_____	_____	_____
1973 (estimated)	_____	_____	_____

13. If you have any further data that might be useful in developing a profile of the ORV recreationist please include it when returning this questionnaire. We would be especially interested in family participation statistics and reference to social values gained from ORV recreational activities.

\*Southern California includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura.

ECONOMIC PROFILE OF THE FOUR WHEEL DRIVE  
INDUSTRY IN CALIFORNIA

We would like to have you respond to the following questions.  
If the data you have collected does not fit this format, add  
or delete as necessary.

1. Retail Sales of 4-Wheel Drive Vehicles:

Estimated Dollars \_\_\_\_\_

\*Estimated % Southern  
California \_\_\_\_\_

2. Retail Sales of 4-Wheel Drive Parts and  
Accessories:

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

3. Manufacturer/Distribution Advertising Expenses:

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

4. Preparation of Advertising:

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

5. Trade Shows (include attendance receipts,  
exhibit fees, or display materials):

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

6. Average Dealer Operating Expense:

Estimated average %  
of gross sales \_\_\_\_\_

7. National Revenue for 4-Wheel Drive Distribution:

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

\*Southern California includes the counties of Imperial,  
Orange, Riverside, San Bernardino, Los Angeles, San Diego,  
and Ventura.

8. National Revenue for Parts and Accessories  
Distribution:

Estimated Dollars \_\_\_\_\_

% Southern Calif. \_\_\_\_\_

9. Average Advertising Expenditure Per Dealer:

Estimated Dollars \_\_\_\_\_

Number of Dealers  
in California \_\_\_\_\_

Number of Dealers  
in Southern Calif. \_\_\_\_\_

10. Estimated Percent of the 4-Wheel Drive Market Your  
Company Supplies in:

California \_\_\_\_\_

Southern Calif. \_\_\_\_\_

11. If you have any further data that might be helpful  
in developing a picture of the economic importance  
of the 4-Wheel Drive Industry in California please  
include it when returning this questionnaire.



# ORV CLUB RECREATIONAL PROFILE

1. While using the ORV for recreational activities does the club member carry passengers?

Yes \_\_\_\_\_ %      No \_\_\_\_\_ %

Who is the passenger (s)?

Family \_\_\_\_\_ %

Non-family \_\_\_\_\_ %

2. During his off highway recreational activities, is he:

Alone (no other vehicles) \_\_\_\_\_ %

With club members \_\_\_\_\_ %

With non-club members \_\_\_\_\_ %

3. Which of the following recreational activities do club members use their vehicle in conjunction with?  
(Please rate activities in order of importance to the club.  
Also estimate the percent of club members who participate in each activity)

<u>ACTIVITIES</u>	<u>ORDER OF IMPORTANCE TO CLUB</u>	<u>% OF CLUB MEMBERS WHO PARTICIPATE</u>
Hunting	_____	_____
Fishing	_____	_____
Camping	_____	_____
Rockhounding	_____	_____
Sightseeing	_____	_____
Competition	_____	_____
Backcountry exploring	_____	_____
None	_____	_____
Other	_____	_____
	_____	_____
	_____	_____

4. When choosing an area for club activities in which ORV's are to be used, which of the following factors are important? (Please rank them by order of importance)

1. Size of area where ORV can be used \_\_\_\_\_
2. Existence of roads and trails \_\_\_\_\_
3. Travel distance to area \_\_\_\_\_
4. Degree of development (existence of camp facilities etc.) \_\_\_\_\_
5. Number and degree of restrictions within area \_\_\_\_\_
6. Scenic appeal of area \_\_\_\_\_
7. Feeling of remoteness \_\_\_\_\_
8. Area rugged with challenging terrain features \_\_\_\_\_
9. Existence of specific attractions such as historic sites etc. \_\_\_\_\_
10. Opportunity to test vehicle performance against another vehicle \_\_\_\_\_
11. Good opportunity to travel cross-country without trails \_\_\_\_\_
12. Degree of existing damage because of previous mining, grazing or vehicular use \_\_\_\_\_

5. What is the total membership of all clubs in your association \_\_\_\_\_
6. Total number of ORV's owned by club members in your association \_\_\_\_\_
7. What has the trend in club membership been:

NUMBER OF MEMBERS

1960	_____
1965	_____
1970	_____
1971	_____
1972	_____
1973	_____

8. Estimate the percent of club outings that occur on BLM administered land. \_\_\_\_\_
9. Please provide a list of clubs that are members of your association.

# ORV USE PROFILE OF NON-ORV ORIENTED CLUBS

1. What is the total California membership of your club or association? \_\_\_\_\_
2. What percent of the members of your club or association own an off-road vehicle? \_\_\_\_\_
3. In what percent of your club or association activities is the use of off-road vehicles necessary? \_\_\_\_\_
4. What percent of your clubs or association activities are on public lands? \_\_\_\_\_
5. When choosing an area for club activities in which ORV's are to be used, which of the following factors are important (Please rank them by order of importance)
  - a. Size of area where ORV can be used \_\_\_\_\_
  - b. Existence of roads and trails \_\_\_\_\_
  - c. Travel distance to area \_\_\_\_\_
  - d. Degree of development (existence of camp facilities etc.) \_\_\_\_\_
  - e. Number and degree of restrictions within area (use highly limited by private land etc.) \_\_\_\_\_
  - f. Scenic appeal of area \_\_\_\_\_
  - g. Feeling of remoteness \_\_\_\_\_
  - h. Area rugged with challenging terrain features \_\_\_\_\_
  - i. Existence of specific attractions such as historic sites, popular rockhound areas, or interesting archeologic, botanic, geologic areas etc. \_\_\_\_\_
  - j. Opportunity to test vehicle performance against another vehicle \_\_\_\_\_
  - k. Good opportunity to travel cross-country without trails \_\_\_\_\_
  - l. Degree of existing damage because of previous mining, grazing or vehicular use \_\_\_\_\_
  - m. Degree of noise as a result of other vehicles in area \_\_\_\_\_
6. Which, if any, of the following recreational activities do members use on ORV in conjunction with:

## ACTIVITIES

% OF CLUB MEMBERS  
WHO USE VEHICLE FOR:

Hunting	_____
Fishing	_____
Camping	_____
Rockhounding	_____
Sightseeing	_____
Competition	_____
Backcountry Exploring	_____
As a means of transportation to Backcountry areas	_____
for the purpose of participating in other recreational	_____
activities such as hiking ect.	_____
None	_____
Other	_____

7. Please make any relevant comments regarding the importance of the ORV to your club or association activities.

# AL BUCK FILMS

7407 SAN CARPINO DRIVE - GOLETA, CALIFORNIA 93017  
(805) 968-6554

September 12, 1973

Bureau of Land Management  
District Office  
Riverside, California

Attention: Mr. James Owings

Dear Mr. Owings:

Enclosed are the results of a limited social study of two groups of motorcycle enthusiasts. The largest questionnaire sampling was completed among Southern California desert motorcyclists, and the smaller sampling among closed-course motocross racing cyclists.

Some of the questions were academic, to determine some relative facts regarding where these people ride, who they ride with, etc. Other fill-in questions were used for a more in-depth understanding or psychological analysis of those randomly sampled.

We regret that we were not able to complete a thorough social-psychological analysis, due to lack of funds and time. However, we thank you for the opportunity to submit this limited report.

Sincerely,

*Cherry Stockton*

Cherry Stockton, M.A. Ergonomics and Physical Education  
California General Secondary Teaching Credential

*Albert L. Buck III*

Albert L. Buck III, President  
AL BUCK FILMS

MOTORCYCLIST QUESTIONNAIRE --- information to better understand social aspects of people and families involved in OHV recreation. To be used in a comprehensive B.L.M. Report of OHV use, affecting management policies of public land in the Southwestern United States.

1. Sex \_\_\_\_\_ Age \_\_\_\_\_ Occupation \_\_\_\_\_
2. How long have you been riding motorcycles? \_\_\_\_\_ yrs.
3. Type of riding - (total 100%)  
street \_\_\_\_\_ % trail \_\_\_\_\_ % competition \_\_\_\_\_ %
4. Who do you ride with? - (100%)  
family \_\_\_\_\_ % friends \_\_\_\_\_ % club buddies \_\_\_\_\_ % other \_\_\_\_\_ %
5. Where do you do most of your riding? - (total 100%)  
\_\_\_\_\_ % private property  
\_\_\_\_\_ % commercial recreational areas (eg. Indian Dunes)  
\_\_\_\_\_ % public lands (eg. open desert, National forests)
6. What got you interested in riding motorcycles? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Have you gained any personal insights (discovered anything new about yourself) from your motorcycling experiences?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. What does being involved with motorcycles do for you? (check which apply)
- |                                     |                                  |
|-------------------------------------|----------------------------------|
| _____ relieves tension, aggression  | _____ helps maintain healthy     |
| _____ feelings of freedom           | _____ physical condition         |
| _____ human companionship           | _____ develops self-reliance     |
| _____ empathy for others            | _____ "getting away from it all" |
| _____ feelings of physical          | _____ keeps family closer        |
| _____ accomplishment (riding skill) | _____ together                   |
|                                     | _____ other                      |

(Use other side of page if necessary)

9. Why have you chosen motorcycles rather than some other sport as your major recreational activity.

10. What are the particular things and/or feelings you have about dirt bikes that keep you involved with them?

11. Has being involved with motorcycles helped you in any of the following ways:

☐ discontinued or lessened involvement with drugs  
☐ discontinued or lessened involvement with alcohol  
☐ discontinued or lessened involvement in illegal activities (theft, burglary, disturbing peace, vandalism)

12. In your opinion, do we need more \_\_\_\_\_, the same \_\_\_\_\_ or less \_\_\_\_\_ land available for riding motorcycles? WHY?

13. Family Information

	Sex	Age	Occupation	# of years riding	does not ride	if they don't, why not
1.						
2.						
3.						
4.						
5.						
6.						

Bureau of Land Management  
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